

### **REMARKS**

Applicants appreciate the Examiner's thorough examination of the present application as evidenced by the final Office Action of September 7, 2004 (hereinafter "Final Action"). Applicants especially appreciate the allowance of Claim 49 and the indication that Claims 4, 10, 20, 27, 30, 41, and 44 recite patentable subject matter. In response, Applicants have amended Claim 1 to incorporate the recitations of Claim 4, amended Claim 9 to incorporate the recitations of Claim 10, amended Claim 19 to incorporate the recitations of Claim 20, amended Claims 27 and 30 to write these claims in independent form, amended Claim 33 to incorporate the recitations of Claim 34, amended Claims 41 and 44 to write these claims in independent form, and canceled Claim 47. As a result, Claims 4, 10, 20, 26, 34, 37, and 40 have been canceled without prejudice or disclaimer. Accordingly, the sole remaining issues are the patentability of Claims 33, 35 - 39, 42, 43, 45, 46, 48, and 50. Applicants respectfully request that the Examiner take one final look at independent Claims 33, 48, and 50 in light of the remarks included herein. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter.

#### **Independent Claim 33 is Patentable**

Independent Claim 33 stands rejected under 35 U.S.C. §103(a) as being obvious over U. S. Patent No. 6,597,927 to Eswara et al. (hereinafter "Eswara") in view of U. S. Patent No. 6,298,081 to Almgren et al. (hereinafter "Almgren") and further in view of U. S. Patent No. 6,256,486 to Barany et al. (hereinafter "Barany"). Independent Claim 33 has been amended to incorporate recitations from dependent Claim 34. Moreover, Applicants note that Claim 34 is analogous to Claim 20, which has been found to recite patentable subject matter. Accordingly, Applicants submit that Claim 33, as amended, is patentable for at least the same reasons that Claim 20 has been found to recite patentable subject matter.

Applicants respectfully submit that independent Claim 33 is patentable over Eswara, Almgren and Barany and that Claims 35 - 39, 42, 43, 45, and 46 are patentable at least per the patentability of independent Claim 33.

**Independent Claim 48 is Patentable**

Independent Claim 48 stands rejected under 35 U.S.C. §103(a) as being obvious over Eswara in view of Almgren. Independent 48 recites, in part:

a base station subsystem; and  
a mobile terminal that is configured to use a control frequency to exchange control information between the mobile terminal and the base station subsystem, the exchange of control information being constrained to the control frequency, and is configured to use coordinated frequency hopping based on a hopping sequence over a plurality of traffic frequencies to exchange traffic information between the mobile terminal and the base station subsystem;  
**wherein frequencies associated with an auxiliary cellular communication system coexist within a same bandwidth defined by the plurality of traffic frequencies.** (Emphasis added).

According to Claim 48, the frequencies within the auxiliary cellular communication system coexist within a same bandwidth defined by the plurality of traffic frequencies. In rejecting Claim 6, the Final Action alleges that Eswara discloses an auxiliary cellular communication system that coexists within a same bandwidth defined by a plurality of primary frequencies in FIG. 4. Applicants respectfully disagree with this interpretation of Eswara's teachings. With reference to FIG. 3, Eswara explains that the four beams A, B, C, and D shown in FIG. 4 "would have an assigned set of traffic frequencies for use by MSs and a control frequency for assigning traffic frequencies.." (Eswara, col. 3, lines 45 - 48). Applicants can find no disclosure or suggestion in Eswara indicating that one or more frequencies used in one of the beams A, B, C, or D may be within the bandwidth defined by frequencies used in another one of the beams A, B, C, or D. Moreover, Almgren fails to provide the missing teaching.

Accordingly, for at least the foregoing reasons, Applicants respectfully submit that independent Claim 48 is patentable over Eswara in view of Almgren.

**Independent Claim 50 is Patentable**

Independent Claim 50 stands rejected under 35 U.S.C. §102(e) as being anticipated by Barany. Independent Claim 50 recites, in part:

assigning a control frequency to a cell in which the mobile terminal is located;

using the control frequency to exchange control information between the mobile terminal and the base station subsystem, the exchange of control information being constrained to the control frequency;

assigning a plurality of traffic frequencies to the cell in which the mobile terminal is located, each of the plurality of traffic frequencies being associated with an equivalence class of frequencies;

**randomly selecting a frequency from each of the plurality of equivalence classes of frequencies; and**

**using the randomly selected frequencies to communicate traffic information between the mobile terminal and the base station subsystem.**  
(Emphasis added).

Applicants respectfully submit that Barany does not disclose or suggest, at least, the highlighted recitations above. That is, Barany does not disclose or suggest using randomly selected frequencies from each of a plurality of equivalence classes of frequencies to communicate. The Final Action alleges that Barany discloses randomly selecting a frequency from each of the plurality of equivalence classes of frequencies at col. 14, lines 55 - 56. This passage of Barany cited in the Final Action refers to the use of a packet random access channel (PRACH) for uplink communications. Applicants respectfully disagree, however, that the use of a PRACH discloses randomly selecting a frequency from each of the plurality of equivalence classes of frequencies as recited in Claim 50. In the art of radio access protocols, a PRACH is used to address the problem of how to share a common broadcast channel. Thus, the term "random" when used with respect to a random access channel means that there is no predictable or schedule time for a mobile station to transmit. Applicants submit that use of a PRACH has nothing to do with randomly selecting a frequency from each of a plurality of equivalence classes of frequencies and using the randomly selected frequencies to communicate traffic information between a mobile terminal and a base station subsystem.

Accordingly, for at least the foregoing reasons, Applicants respectfully submit that independent Claim 50 is patentable over Barany.

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### CONCLUSION

In light of the above amendments and remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested. Alternatively, Applicants respectfully request entry of the present amendment as introducing no new issues and narrowing the issues for further consideration. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "D. Scott Moore", written over a horizontal line.

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